OLGU SUNUMU (Case Reports)

Xanthomonas Maltophilia Peritonitis in Two Patients Receiving Continuous Ambulatory Peritoneal Dialysis

Sürekli Ayaktan Periton Diyalizi Uygulanmakta Olan İki Hastada Xanthomonas Maltophilia Peritoniti

Ramazan Çetinkaya, MD.
Department of Nephrology,
Atatürk University Medical Faculty
ramazancetinkaya@yahoo.com

Abdullah Uyanık, MD.
Department of Nephrology,
Atatürk University Medical Faculty

Rahsan Yıldırım, MD.
Department of Internal Medicine,
Atatürk University Medical Faculty

Yusuf Bilen, MD.
Department of Internal Medicine,
Atatürk University Medical Faculty

Mustafa Keles, MD.
Department of Nephrology,
Atatürk University Medical Faculty

Nurdan Şimşek, MD.
Department of Internal Medicine,
Atatürk University Medical Faculty

Dilara Bayraktutan, MD.
Department of Internal Medicine,
Atatürk University Medical Faculty

Abstract
Peritonitis is common and sometimes becomes a challenging complication of peritoneal dialysis. Xanthomonas maltophilia (XM) infection has only been occasionally reported in patients receiving chronic peritoneal dialysis. We presented 2 peritonitis cases with XM, one recovered without the need of catheter removal whereas the other lost the CAPD catheter. Both patients were diagnosed within the last three months of our clinic practice.

Key words: **Peritonitis; Peritoneal dialysis; Xanthomonas maltophilia.**

Özet
Peritonit oluşumu periton diyalizi hastalarında yaygın ve uğraştırıcı komplikasyonlardan birisidir. Xanthomonas maltophilia (XM) peritoniti ise bu hastalarda sık bildirilen bir peritonit etkeni değildir. Kliniğimizde takip ettiğimiz iki sürekli periton diyaliz hastasında peritonit etkeni olarak XM saptadık. Bu iki hastadan birisinde periton kateterini çekmek zorunda kaldık. Diğeri ise kateter kaybedilmeden tedavi edildi. Nadir görülen bir etken olmasına karşılık genelde ciddi seyirli bir peritonite yol açtığı için konuya dikkat çekmek amacıyla bu iki olguyu sunmayı amaçladık.

Anahtar sözcükler: **Periton diyalizi; Peritonit; Xanthomonas maltophilia.**

Submitted : January 20, 2007
Revised : June 14, 2007
Accepted : July 16, 2007

Corresponding Author:
Ramazan Çetinkaya, MD.
Department of Nephrology,
Atatürk University Medical Faculty
Erzurum, Turkey

Telephone : +90 - 442 - 2361212
E-mail : ramazancetinkaya@yahoo.com

Introduction

Continuous ambulatory peritoneal dialysis (CAPD) is one of the choices for renal replacement therapy for end stage renal disease (ESRD) patients. Peritonitis is common and sometimes becomes a challenging complication of peritoneal dialysis. Xanthomonas maltophilia (XM) is a gram negative bacillus that has become increasingly recognized as an important nasocomial pathogen, particularly in individuals with severe debilitation or immune suppression. XM peritonitis in CAPD patients is associated with poor prognosis and commonly results in the loss of CAPD catheter. XM peritonitis is not a common type of peritonitis, so its treatment and follow up becomes an argumentation subject for physicians. We described two peritonitis cases with XM, one recovered without the need of catheter removal whereas the other lost the CAPD catheter. Both patients were diagnosed within last three months of our clinic practice.

Case Report

Case I. A 63 year old female diagnosed with ESRD 3 months previously had received CAPD since diagnosed. She presented to our clinic with complaints of cloudy dialysate effluent for 2 days, nausea, vomiting, loss of appetite and abdominal pain. Her physical examination revealed diffuse abdominal tenderness without defense or rebound. She was hospitalized with the diagnosis of CAPD peritonitis. Her laboratory results, except for white blood cell (WBC) count of CAPD dialysate, were comparatively unremarkable compared with ESRD patients. White blood cell count of CAPD dialysate was 4600/ml and neutrophils made up 78% percent. After cultures and other microbiological samples were taken, 1 gr/day Cefazolin Sodium and 1 gr/day Ceftazidim both intraperitoneally were started according to our clinic administration. White blood cell count in CAPD dialysate was checked daily. At the end of first week, treatment WBC count in dialysate was 1300/ml, and XM was isolated in CAPD dialysate culture. The isolated XM was not susceptible to Cefazolin, and consequently antibiotic therapy was re-evaluated and updated according to the culture results. Vancomycin 1gr intraperitoneally was administered every 5th day. On the 21st day of initial and the 15th day of updated therapy, WBC count of CAPD dialysate was 11.300/ml. The CAPD catheter was surgically removed. Antibiotic therapy was continued intravenously for 2 weeks. The patient changed to hemodialysis without further complications.

Case II. A 58 year old male patient who had been receiving CAPD for one year presented to our clinic with symptoms of nausea, vomiting, abdominal pain, fever and cloudy dialysate effluent. His physical examination revealed poor medical condition, white colored oral plaques that were subsequently diagnosed as oral candidiasis, diffuse abdominal tenderness, severe dehydration, and inspiratuar cracles at the lower zones of the left lung. He was hospitalized immediately. His medical history also had included diarrhea episodes for 5 days that had ended before his complaints started. His initial WBC count of CAPD dialysate was 35.120/ml and after CAPD dialysate samples were taken for microbiological investigation 1gr/day Cefazolin Sodium and 1gr/day Ceftazidim were both started intraperitoneally according to our clinic administration. In addition, oral mycostatin and parenteral fluconazole were added to his initial therapy treatment. Due to severe dehydration and lack of oral intake, as a result of oral candidiasis, parenteral nutrition and intravenous saline were added to his therapy. On the 5th day of therapy, WBC count of CAPD dialysate was 5.400/ml and XM was isolated from CAPD culture. The isolated XM species was resistant to imipenem, meropenem and ceftazidime. Antibiotic therapy was checked and Vancomycin 1gr was added intraperitoneally every 5th day. WBC count of CAPD dialysate was fell below 100/ml on the 10th day. The patient was discharged after 22 days of successful treatment.

Discussion

The most common pathogens associated with peritonitis in patients with CAPD are gram-positive bacteria (1) which constitute 60 – 80% of all isolates. Those include coagulase negative staphylococci, staphylococcus aureus and diptheriods which are especially part of normal skin flora. XM is an aerobic gram-negative organism with multitrichous flagella that enhance adherence of bacteria to the silastic CAPD tube as demonstrated in other pseudomonas species (2), that would possibly explain the failure of treatment by antibiotics alone. XM is a common environmental saprophyte that has been isolated from water, soil, foods, hospital equipment, animal sources and humans (3). XM induced peritonitis was formerly regarded as nasocomial infection (1,4) however, later in clinic practice community acquired infections reported (3) as in our case. Well-known predisposing conditions for XM infection include malignant disease, neutropenia, immunosuppressive therapy, prior treatment with broad-

spectrum antibiotics and indwelling vascular devices (5-10). We had experienced 2 cases of maltophilia peritonitis and although one lost the catheter the other was successfully treated without catheter removal with a 22 day therapy treatment which can be regarded as short compared with reported XM cases. One of our cases had concomitant medical problems such as oral candidiasis reminds us immune suppression that accused as predisposing factors to XM peritonitis. Multi-drug resistance of XM is again a problem which arose with the cases in the present study. The isolated malthophilia species in both patients were resistant to imipenem, meropenem, and ceftazidime and susceptible to TMP-SMX, amikacin, gentamycin, ciprofloxasin, as in reported case studies (3). Multi-drug resistance, being a member of human skin flora and nasocomial etiology increase use of broad spectrum antibiotics and this condition becomes a dilemma in clinic experience due to increasing spectrum of resistance.

In conclusion, although XM peritonitis is a rare condition it should considered in multidrug resistant, long standing long term chronic peritonitis cases. In case of XM peritonitis antibiotic regimes should include broad spectrum antibiotics together with TMP-SMX or one of the other groups (aminoglycosides, quinolones, and beta-lactams) in order to achieve successful treatment of peritonitis without the need of catheter removal. Removal of the catheter is also considered after 3 weeks of unsuccessful therapy period.

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